THE SOCIAL HISTORY OF THE CAUL*

THOMAS R. FORBES**

L'imagination engendre la superstition, la raison engendre la science.[15]

The history of obstetrics, perhaps more than that of many sciences, includes a large measure of superstition. In earlier centuries the normal phenomena of pregnancy and labor were understood, if at all, incompletely; related abnormalities were even more puzzling. Before adequate scientific explanations were available, speculation had to suffice, and superstition was often a result.

Infrequently, in past ages as now, a baby is born with a thin, translucent tissue, a fragment of the amniotic membrane, covering its head. The remnant is known as a *caul.*[5] The modern obstetrician quickly removes the membrane (it may be interfering with the infant's efforts to begin respiration) and discards it. His professional predecessors, the physicians and midwives of earlier centuries, would have been more interested, for strong magic and strange beliefs were once related to the caul.

In countries all over the world it was expected that the membrane would bring fame and fortune to its owner.[9, 34, 41, 50, 67, 80, 107] Aelius Lampridius, a classical historian, related that the emperor Antonius Diadumenianus or Diadematus (born 19 September 208 A.D.) was so called because at birth his head was encircled with a fillet (*diadema*), twisted like a bowstring and so strong it could not be broken.[33, 35, 63, 69, 86] One supposes that the caul in this case had been rolled into a band. Although the possession of the fillet was expected to bring him good luck, Diadumenianus was assassinated while a youth.[106] Caul superstitions were recorded again after the Dark Ages. Cornelius Gemma, a sixteenth century physician, scorned belief in the powers of the caul.[30] He described it quaintly as being ". . . nothing other than the remnant of another membrane, much softer than the amnion, but nevertheless more solid, bound with a purple border or fringe, and wrapped around the whole head down to the umbilicus, not without great danger to the baby unless the membrane was removed as quickly as possible; thus I myself have observed it in my first-born son who came helmeted [*galeatus*] into the world." Van der Spiegel, a Belgian anatomist, explained

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how the amniotic membrane may in childbirth "be draped partly or completely around the head, so that in the male it may be called a helmet [*galea*] by the German obstetricians, or in the female, as the Italians put it, a fillet [*vitta*] or shirt" [*indusium, camisia*].[89] He suggested that it is ridiculous to attach supernatural significance to a phenomenon which can be readily explained.

Charles Drelincourt (1633-1697), another physician, wrote *De Foetum Pileolo sive Galea* [On the Little Cap or Helmet of Fetuses].[88] Unfortu-

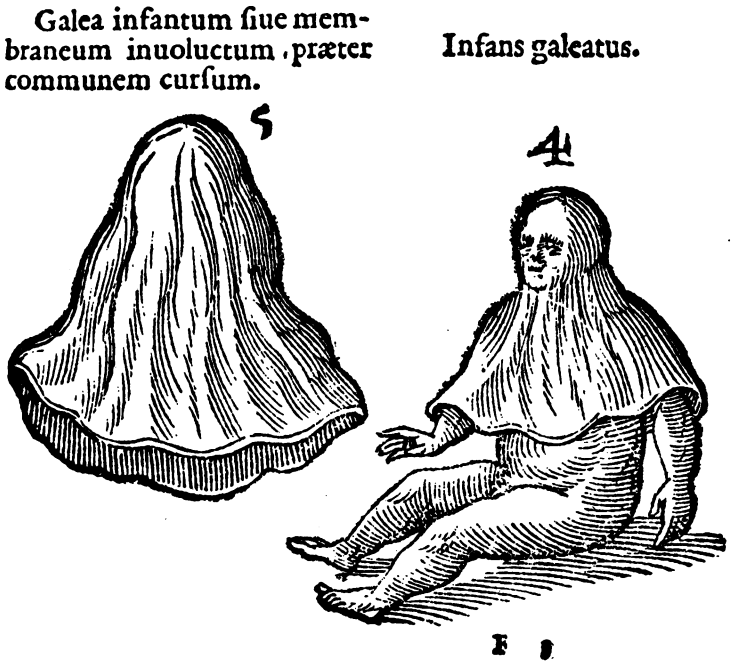

FIG. 1. A sixteenth century concept of the caul, from Gemma's book.[89] See text.

nately, his rather extended discussion consisted largely of harsh sarcasm directed at the ideas of some of his colleagues regarding the caul. Drelincourt made it clear that he too rejected any idea of the membrane's power to bring good fortune.

In the following century, Thiers, in his interesting *Traité des superstitions,*[95] quoted the French proverb that the happy man was born with a veil (*est né cöeffé*) and expressed the opinion that any advantage coming to one who wears the caul as a charm could only be with the help of the Devil. Haller, the Swiss physiologist, made passing reference in his *Physiologie*[48] to the caul as a supposed sign of good luck. Thomas Bartholin scoffed at the superstitions because, he said, he had known unlucky children who were born with cauls and lucky children who were born without them.[12]

Spindler,[90] another physician of the period, said that he had never heard of a caul worn as a charm bringing good luck, but then told of a male patient who ascribed his impotence to the fact that his wife wore such a charm, i.e., the caul could have an evil influence. In Hungary it was darkly prophesied that he "who is born in the cloak [*Hulle*] dies in the rope."[50]

The beneficent effect of the caul was sometimes regarded as extending to the offspring of the original owner, but, according to a superstition of the Middle Ages and later, this effect would be lost if the caul were given away or sold outside the family.[4, 50] On 20 May 1658 the will of "Sir John Offley, Knight of Madely Manor, Staffordshire" was probated. The document includes the following bequest: "Item, I will and devise one Jewell done all in Gold enammelled, wherein there is a Caul that covered my face and shoulders when I first came into the world, the use thereof to my loving Daughter the Lady Elizabeth Jenny, as long as she shall live. . . ."[22] It was directed that the caul be passed on to the males of succeeding generations and that "the same Jewell be not concealed nor sold by any of them." One notes that the bequest refers not only to the possession but also to the "use" of this curious heirloom.

Lemnius discussed the caul in his *De Miraculis . . . Naturae,* first published in 1559. A 1658 edition, in English, of this work[60] includes the chapter heading: "Of the Helmets of Children newly born, or of the thin and soft caul, wherewith the face is covered as with a vizard, or covering, when they come first into the world." He quotes "old Wives . . . who do but dote, and know not what they say" to the effect that a black caul presages accidents, misfortunes, and haunting by evil spirits unless the caul "be broken and given in drink, which against my will many have done to the great hurt of the child." But if the caul is red or clings to the crown of the head, the child is expected later to achieve great success.[60] Such interpretations were examples of *amniomancy,* the practice of foretelling the future by inspection of the caul.[57, 88] If the caul were "white" (i.e., colorless) or red, it would bring good fortune; if black or lead-colored, the child would be unlucky.[57, 80, 88] In Herzegovinia, a part of Jugoslavia, it was thought that a baby born with a black caul would grow up to become a witch or sorcerer unless, on the first night after the birth, a woman carried the caul to the roof top and announced that "A child was born at our house in a bloody shirt" [*Hemde*]. Elsewhere in Jugoslavia the midwife carried the newborn baby itself to the threshold and announced three times that a real baby had been born, and not a witch or sorcerer.[80] Whether these procedures were regarded as charms or simply as attempts to prevent superstitious rumors among the neighbors is not reported.

Reference to the caul as a "shirt" (see above) illustrates the curious terminology which was developed for the membrane in various countries. Andrews[3] and others have called attention to the fact that semantic changes often involve a shift in meaning from the general to the specific. Certainly

several terms which originally identified the entire amnion came later to signify only the *caul,* e.g., *membrana agnina* and *amiculum* (Latin), *coëffe* and *coiffe* (French) and *Schafhäutlein* and *Kinderbälglein* (German). The word *caul* itself, on the other hand, was sometimes used as a synonym of *amnion.* (*Caul,* in addition, could mean a net, the web of a spider, the base of a wig, a woman's cap, and any of several anatomical investing layers.)[71]

One finds further that the same ideas suggested themselves repeatedly in different lands in the fanciful names appropriated to identify the caul. Examples are: *membrana agnina* (Latin, lamb's skin), *membrane agnelette* (French, lamb's skin), and *Schafhäutlein* (German, little lamb's skin); *galea* (Latin, helmet) and *Helm* and *Knabenhelm* (German, Dutch, helmet, boy's helmet); *pileus, pileolus* (Latin, a close fitting cap like a skull cap); *calotte* (French, skull cap); *Haube, Häublein, Glückshaube, Wasserhaube, Wehmutter-häublein* (German, cap, little cap, lucky cap, water cap, midwife's cap); *silly hood, silly how, sely how, haly how* (English, Scottish, lucky or holy cap); *coiffe, coëffe* (French, veil), *veil* (English); *involucrum* (Latin, covering, wrapper), *Kinderbälglein* (German, child's covering), *súpot* (Tagalog, bag, paper bag); *amiculum* (Latin, dear friend, cloak), *sigurkufl* (Icelandic, lucky coat or cape). Other terms which imaginatively described the caul include *pellis secundina, indumentum* (Latin, second skin, mask), *mask* (English), and *Muttergottestüchlein* and *Kindesnetzlein* (German, Virgin's handkerchief, child's little net).[1, 8, 9, 20, 28, 37, 38, 42, 44, 46, 50, 51, 60, 61, 70, 71, 74, 76, 88, 89, 101, 105] The resemblance of the caul to a close-fitting shirt or under-garment is suggested repeatedly: *indusium* (Latin, shirt), *camicia della Madonna* (Italian, Virgin's shift), and *Hemd, Hemdlein, Westerhemd,* and *Muttergotteshemdlein* (German, shirt, little shirt, vest-like shirt, Virgin's shift.[44, 50, 51, 89, 101, 108]

As would be expected, literary references to the caul are not uncommon. The Oxford Dictionary gives examples dated as early as 1547.[71] *Kell,* a variant of the term, had appeared in print by 1530. Subsequently, the caul was alluded to in English plays,[32, 71] poetry,[49] and elsewhere, including the familiar introduction ("I was born with a caul. . . .") in *David Copperfield.*[31]

Because of the pronunciation and meaning of *cowl,* it has been suggested that this word is cognate with *caul* and the related Scottish *kell.*[14, 71, 98] A fancied similarity of the monk's cowl to the caul is also said to be the basis of the belief that a child born with a caul was destined by Providence for the monastery or convent.[19, 106] In Austria it was expected that a boy would become an archbishop if he carried his caul in his clothes.[50] *Notes and Queries,* that extraordinary repository of antiquarian and other information, offers a quotation from a British newspaper, the Leeds *Mercury,* for 14 September 1889.[70] A laborer's wife bore a son on whose head was a caul. "The veil was placed on one side, and no notice was taken of it until some hours after the child's birth. When examined, however, it was found that the words 'British and Foreign Bible Society' were deeply impressed upon

the veil. When this discovery was made the greatest excitement prevailed in the neighbourhood, some of the women declaring that nothing short of a miracle had been enacted. The doctor, who inquired into the matter, however, soon explained the affair. The veil, whilst in a pliable condition, had been placed upon a Bible, on the cover of which the words 'British and Foreign Bible Society' were deeply indented. The words were in this way transferred to the veil; but some of the inhabitants still ascribe the affair to supernatural influence. . . ."

Elsewhere in England it was believed that, for as long as he kept his caul, the individual born with it would be a wanderer.[88] In Iceland, in the islands near New Guinea, in the Kentucky mountains, and elsewhere one born with a caul was thought to be clairvoyant.[9, 36, 40, 57, 96] The Dutch and the Negroes of North America and the West Indies believed that he could see and talk with ghosts.[7, 41, 47, 57] The caul was also a protection against sorcery, evil spirits, and demons.[9, 57] In Germany the owner carried his caul when he was conscripted, with the hope that this charm would speed his release from military service.[78] Finally, the appearance of the caul gave an indication of the present health of the owner, even if he were absent; a dry, white, crisp caul meant good health, while a damp, black, limp caul betokened illness.[47, 57, 98]

It was regarded as important that the caul either be preserved or disposed of carefully at childbirth. The basis for this idea was very likely the widespread belief that in the caul resided the child's guardian spirit or "life token."[9, 41, 47, 50, 57, 78] In Iceland the caul was buried by the midwife under the threshold over which the mother would later pass.[41, 50] Hastings[47] suggests that this may have been done so that if the child died, its spirit could return to the mother and be born again. In Belgium it was thought that the child would be lucky if the caul were buried in a field, unlucky if the membrane were burned or thrown on the trash heap.[41, 50, 78, 107] The owner would have great misfortune[47] or even die if the caul were lost[98] or torn.[57]

There is a curious report that when a child was christened, the caul was secretly baptized.[50] It was frequently worn in the clothes or carried in an amulet as a protective agent.[41, 47, 50, 76, 80, 108] The caul might even be eaten by the owner in an egg dish, according to Hovorka and Kronfeld.[50] In the islands near New Guinea, a child washed with water in which the caul had been steeped and later fed the powdered caul would be freed of the power of clairvoyance,[36] which evidently was not always regarded as an asset. On the other hand, in Pomerania it was believed that if the caul were burned to a powder and then given to the baby with its milk, the child would become a vampire.[103]

In Germany and elsewhere in Europe the midwife sometimes stole the caul, according to report, to give it to another child,[50, 107] perhaps her own,[78] or to sell it to a witch.[34, 48] The latter were reported to prize cauls highly as potent aids in their evil doing. Vesalius[101] makes passing reference in the

Fabrica to preservation of the caul by ignorant people of some races, adding that both the midwives and the "secret philosophers" greatly coveted this membrane. It is quite clear, however, that Vesalius spurned the superstition.

The *Journal de L'Estoile pour le Regne de Henri IV,*[59] a colorful account of daily events in Paris in the sixteenth century, tells how two priests who were also practitioners of witchcraft battled for a caul in a church on 21 October 1596. It seems that one, *le sorcier,* forgot to take his caul with him when he left the altar. The other, finding the caul, refused to return it, whereupon a noisy quarrel followed *avec grande scandale de tout le peuple.* The finder of the caul succeeded in retaining it, but was promptly accused of sorcery and thrown into prison. He subsequently escaped with the help of his friends and proceeded to take his revenge on his colleague. That possession of a caul was thought to be worth such a scandalous episode clearly illustrates the strength of the superstition at that time.

Twenty-one years later Louise Bourgeois, famed midwife to the court of France, in a textbook of obstetrics (intended for her daughter), spoke her mind on the ethics of midwifery.[18,40] Mme. Bourgeois issued a specific warning about the caul (page 206): *"Ne retenes jamais la membrane amnios (dit la coiffe de l'enfant, de laquelle aucuns enfans viennent couuerts la teste & les epaules) d'autant que les sourciers s'en seruent"*—that is, never preserve the caul, as it may be used by sorcerers. One such use is suggested in Burton's *Anatomy of Melancholy*[80]: a list of ingredients for love potions or "philtres" includes dust of a dove's heart, rope with which a man was hanged, tongues of vipers, and "the cloak with which infants are wrapped when they are born" (page 498). Brissaud[19] tells how girls would ask the women assisting in a delivery to save the caul, "believing that if this powder were given to a man, he would at once fall in love with a maiden." In Germany a young man might carry his caul with him to aid him in winning the affection of a girl.[78] In the southern Slavic countries a girl wore her caul as a love charm; if she then touched the skin of a man, he would instantly be attracted to her.[50] Lean (1903)[58] reports that in Scotland there is the expression, *rowed in his mother's sark-tail,* that is, wrapped in his mother's shift, as well as the belief that an adult who as a baby had been so protected would be successful in his love affairs. It is suggested that all this related to the superstition about the caul as a love charm.

According to *The Golden Bough,* on the island of Timor the owner of a caul may use it as a charm to save a failing rice crop.[86]

The caul was frequently believed to confer eloquence on its owner. Several sources report that St. John Chrysostom (347?-407 A.D.), one of the Fathers of the Church, inveighed against the superstitious use of the caul as an aid to persuasive speech, but a rather extensive search of his writings has not disclosed the passage. However, Theodorus Balsamo,[8,60] a twelfth century canonist who likewise criticized employment of the caul as

a charm, tells of a prefect who "was arrested while evidently carrying in his bosom a caul [*indumentum*] of a newborn infant, and said this had been given to him by a certain woman for the purpose of turning away and stopping up the mouths of those who tried to speak against him. Whence he was the subject of condemnation." Aelius Lampridius[33, 35, 63, 69, 86] tells how the Roman midwives made off with cauls, which could be sold to credulous lawyers. The latter believed that possession of the membrane would help them to plead their cases successfully. The same superstition appeared also in Iceland, Denmark, England, and elsewhere in Europe.[9, 50, 107]

The caul was considered valuable as a remedy, both general and specific. From Norse mythology came the belief that if the caul had been dedicated to the Norns, giant goddesses who held men's fates in their hands, childbirth would be easy.[79] In Denmark it was thought that if a woman crept under a foal's caul stretched on sticks she would have a painless labor, but as a penalty her sons would become were-wolves and her daughters night-hags.[68] Ambroise Paré refers[78] to the belief that birth with a caul confers happiness. He adds the clinical suggestion that in a difficult birth the amnion would always be stripped away from the infant, just as "the Snake or Adder when she should cast her skin thereby to renew her skin, creepeth through some strait or narrow passage."[52] Mauriceau, in his textbook of obstetrics,[65] rejects the superstition and dryly remarks that children with cauls "may be said to be fortunate, for having been born so easily; and the Mother also for having been so speedily delivered; for the difficult Labours, Children are never born with such Caps, because being tormented and pressed in the Passage, these Membranes are broken and remain there" (cf. Paré's comment, above).

Sir Thomas Browne[20] recognized the caul superstitions of his period: "Great conceits are raised of the involution or membranous covering, commonly called the Silly-how, that sometimes is found upon the heads of children upon their birth; and is therefore preserved with great care, not only as medical in diseases, but effectual in success, concerning the Infant and others; which is surely no more than a continued superstition." According to Thomas Bartholin,[10, 12] the caul could be made into a medicine and hand lotion for mother and child. He adds a matter-of-fact commentary on the state of professional ethics: if the midwife preparing such a concoction used a substitute for the caul, she could be arrested!

Hovorka and Kronfeld[50] have described an old remedy for malaria. Its remarkable ingredients include snails, egg white, laurel berries, powder from a burned piece of shirt, rust from a coffin nail, a pinch of burned and powdered human bones, *and* a powdered caul. Unfortunately, the rationale for this masterpiece is not stated. In Dalmatia, the caul was placed under the owner's head when he lay on his death bed so that his passing would be easy.[80]

If the caul could bring good health, it could also ward off disaster and danger. There is a relatively recent report of an English farmer who ascribed his own good health and that of his two sons, then fighting in World War I, to the fact that each of them carried the caul of a lamb born in the farmer's flock.[102] This would seem to be simply an extension of the idea of the protective influence of the human caul. (One recalls that both the human amnion and the caul proper were sometimes described in terms comparing them to lambskin.)

Coal miners carried cauls to prevent the explosion of fire damp.[19]

One of the most widespread of all the caul superstitions was that it would protect against drowning.[19, 53, 54] Perhaps the most impressive support for this idea is a perfectly serious statement quoted in *Notes and Queries*[54] regarding a baby born with a caul so effective "that when his mother tried to bathe him he sat on the surface of the water, and if forced down, came up again like a cork." McKenzie,[66] Fairfax-Blakeborough,[34] and others have suggested that the belief in the caul's ability to preserve its owner from drowning is assumed from the membrane's investment of the fetus while it is immersed in the amniotic fluid. Naturally the caul had a particular appeal to sailors. Thomas Hood, the humorous poet, told[49] of a "jolly mariner" who defied a storm because "in his pouch, confidingly, He wore a baby's caul." However, the charm did not prevent disaster in a great storm:

"Heaven never heard his cry, nor did
The ocean heed his caul."

Cauls were formerly offered for sale near the London and Liverpool docks,[4] and advertisements for this commodity appeared in British newspapers until at least the First World War:[91] in the *Daily Advertiser* for July 1790, in the *London Times* for 20 February 1813 and 8 May 1848, in the *Bristol Times and Mirror* for 30 September 1874 ("TO SEA CAPTAINS: For sale, a Child's Caul in perfect condition. £5."), in the *Globe* for 24 July 1903 ("Large Male Caul for sale; no reasonable offer refused."), etc.[48, 55, 84]

The prices asked for cauls, while perhaps little influenced by the supply, which must have been reasonably constant, certainly fluctuated with demand. The latter seems to have been regulated largely by the degree of hazard of the sailor's life and his consequent concern for his safety. Thus, one reads that in 1779 as much as 400 marks was paid for a caul. By 1799 the price paid by British sailors reached 30 guineas. (These were the days of Lord Nelson and great sea battles.) By 1815 the price was down to 12 guineas, and by 1848 a caul was advertised for sale in *The London Times* for 6 guineas. The advertisement states that the caul, "for which fifteen pounds was originally paid, was afloat with its late owner thirty years in all perils of a seaman's life, and the owner died at last in the place of his birth." In 1874 a caul was offered "TO SEA CAPTAINS" for £5. In

1895 a newspaper advertised a price of £5 "or offers"; a week later another advertisement (apparently by another owner) had cut the price to £1 "or offers." A still lower point was reached in the last years before the First World War, when cauls could be purchased for a few shillings. Superstition, however, had not died; when later the deadly submarine campaign was taking its toll, worried sailors and their friends paid as much as £3 to £5 for the protective membrane.[23, 34, 64, 68, 91, 103]

The longevity of some superstitions is surprising until one realizes that the basic phenomenon is often the desire to believe. Fear of the future, worry over personal safety, uncertainty as to a favorable outcome—all these are facets of man's terror of the unknown. One battles the terror in various ways. The educated man is deprived by his very education of most of his ability to believe blindly, and sophistication usually cloaks the lingering remnants of his credulity. (We have seen that belief in the protective value of the caul was rejected by the physician.) Hence he is likely to seek through a reasoned approach some relief from his fear of the future. On the other hand, every age, every culture has provided an abundance of superstition for those who would accept it. The good health, success, and safety offered by the caul beliefs are tempting enough. It is small wonder that these superstitions have persisted. It is likely that they will continue to survive.

Mention must now be made of a group of related beliefs. Witkowski[108] says that the *hippomane,* a potion of the ancients, contained as one of its ingredients the fleshy membrane covering the head of a foal at birth. Classical writers applied the term *hippomanes* to a fleshy mass said to be found on the head of a newborn foal. It appears that the hippomanes and the equine equivalent of the caul, although different structures, have been confused. Both are unusual remnants of the fetal membranes, and the relevant superstitions have much in common.

In ancient times and down through the Middle Ages, *hippomanes* (Latin, Greek; French, *hippomane;* German, *Fullengift, Fohlenmilz, Fohlenbrot,* etc.) might signify a poison, a love potion or ingredient thereof, a plant which produces estrus in the mare, estrus itself, the estrous secretion, or particularly a bit of dark flesh said to lie on the forehead of the newborn foal.[6, 26, 27, 56, 71, 72, 82, 94, 97, 100, 108] According to recent interpretations the hippomanes is the result of a local accumulation of the secretion from the glands of the pregnant uterus. The enlarging mass causes in the horse the progressive invagination of the overlying area of chorio-allantoic membrane into the allantoic cavity or, in the lemur, into the yolk sac.[45, 94] When fully formed the hippomanes consists of a small round or elongate mass of viscous material invested with chorio-allantoic or chorion-yolk sac membrane; the membrane also provides the pedicle connecting the structure to the inner surface of the allantois or yolk sac proper. Thieke states[94] that the

hippomanes may even become detached and lie free in the allantoic cavity between the embryo and its membranes.

One can imagine that a foal might be born with either a folded amniotic fragment (the equivalent of the human caul) or a true chorio-allantoic hippomanes adhering to its head; presumably such an occurrence inspired the inaccurate classical concept. Aristotle describes[6] the growth as black, round, and smaller than a dried fig. The mare, he says, promptly bites off and swallows the hippomanes; if someone steals it (as a love charm), its smell makes the mare frantic. The mass was highly prized as the ingredient of potions. Vergil tells[99] how Dido, desperate because Aeneas was going to leave her, asked a witch to cast magic spells. The witch invoked the deities of darkness, and scattered herbs and water from Lake Avernus:

> *quaeritur et nascentis equi de fronte revulsus*
> *et matri praereptus amor.*

—"and the hippomanes [*amor,* literally, the love], snatched from the forehead of a horse at birth, forestalling the mother, is sought."

In the first century A.D., Lucan, discussing love potions, mentions[62] the hippomanes as a powerful agent. Juvenal and Suetonius both tell[56, 92] how the Empress Caesonia prepared a love potion from the hippomanes for her husband Caligula; the philtre, however, drove him mad.

Pliny, writing in the first century,[77] Aelian[2] and Solinus[87] in the third century, and Photius in the ninth century[75] followed Aristotle closely in their descriptions of the hippomanes. Aelian added that the mare's rage when the *caruncula* is stolen is due to her jealousy of the sorcerers who would make use of the mass in potions for human beings.

After Europe emerged from the Dark Ages, references to the hippomanes again appeared. Porta mentioned it in his *Magiae naturalis*[81] in connection with love potions, as did Wier in a chapter entitled *De Veneficis.*[104] (It is noteworthy that *Veneficis* signified both sorcerers and poisoners, just as *veneficium* meant both witchcraft and poisoning.) Ruini's fascinating book on the horse[84] told, as Thieke has pointed out,[94] of a structure which certainly must be the hippomanes, although Ruini did not give it a name. In a horn of the uterus of the pregnant mare, he says, there has been found an unattached mass which is usually lead-colored, egg-shaped, "and about a half-finger thick if the mare has not carried it for long." Ruini believed that this mass was the poisonous residue of the semen. Clauder remarked[25] that "What the hippomanes actually is, and what its proper use may be, has exercised the wits of physicians and philosophers in many ages. . . ." He rejected the superstitions, including the idea that prompt removal of the mass ensured that the foal would become a swift racer and the belief of a colleague that the administration of 10 grains of dry hippomanes would protect a child against epilepsy.

Bayle's great dictionary discussed[13] the hippomanes superstitions in some detail, but did not imply their current acceptance. A few years later, in

1755 and 1756, Daubenton[28, 29] published what appear to be the first attempts to investigate the hippomanes in scientific fashion. As a comparative anatomist particularly interested in the horse, he dissected many pregnant mares and repeatedly found gelatinous masses in the uterus between, he says, the allantois and the amnion. He concluded: *"Cette expérience prouve clairement que l'hippomanes est un sédiment de la liqueur contenue entre l'allantoïde & l'amnios. . . ."* He also suggested[28] that very rarely a colt might be born with a hippomanes bound to its forehead by an amniotic remnant or *calotte,* like the infants *"qui naissent coëffés, selon l'expression vulgaire. . . ."* He reported[29] finding the hippomanes of the donkey, cow, deer, goat, and ewe.

Buffon in his *Histoire naturelle*[21] and Bourgelat in a volume on veterinary medicine[17] both discussed the hippomanes with considerable understanding. Sind, in another veterinary text,[85] supported the incorrect idea that the hippomanes is a piece of fetal membrane. Nineteenth century works on comparative anatomy described the structure less erroneously and in more detail.[16, 24] It remained for Thieke[94] and Hamlett,[45] however, to dispel misunderstanding of the phenomenon by explaining it. The term *hippomanes,* horse madness, itself survives, testimony to a superstition of the days when biology was born.

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